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PATENT APPLICATION
USSN 09/686,447

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In The United States Patent and Trademark Office
On Appeal From The Examiner To The Board
Of Patent Appeals And Interferences

In re Application of: Carolyn Faour, et al.

Serial No.:   09/686,447

Date Filed: October 20, 2000

Confirmation No.:   5064

Group Art Unit: 2127

Examiner: Nilesh R. Shah

For: *System and Method for Handling a Unit of Work*

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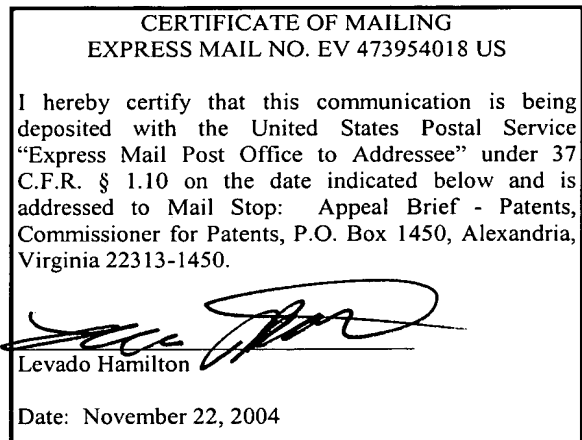
Dear Sir:

Appeal Brief

Appellants have appealed to the Board of Patent Appeals and Interferences ("Board") from the decision of the Examiner mailed May 20, 2004, finally rejecting all pending Claims 1-3, 5-7, 9-15, and 17-35. Appellants filed a Notice of Appeal on September 20, 2004. Appellants respectfully submit this Appeal Brief in triplicate with the statutory fee of $340.00.

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Real Party in Interest

This Application is currently owned by i2 Technologies US, Inc., as indicated by:

an Assignment recorded on August 4, 2000, from the inventors to i2 Technologies, Inc., in the Assignment Records of the United States Patent and Trademark Office ("PTO") at Reel 011037, Frames 0211-0212; and

an Assignment recorded on July 30, 2001, from i2 Technologies, Inc. to i2 Technologies US, Inc., in the Assignment Records of the PTO at Reel 012037, Frames 0589-0600.

Related Appeals and Interferences

No known appeals, interferences, or judicial proceedings will directly affect, be directly affected by, or have a bearing on the Board's decision regarding this Appeal.

Status of Claims

Claims 1-3, 5-7, 9-15, and 17-35 are pending in this Application, stand rejected pursuant to a Final Office Action mailed May 20, 2004 (the "Final Office Action"), and are all presented for appeal. All pending claims are shown in Appendix A, along with an indication of the status of those claims.

Status of Amendments

All amendments submitted by Appellants have been entered by the Examiner.

Summary of Example Embodiments of Claimed Subject Matter

In certain embodiments, a business that assists users with questions regarding products they have purchased may use a technique to track the status of numerous inquiries. One approach is to provide a "trouble ticket," a document that is passed around containing the history of resolving the help request, and other information relevant to the request. (Page 6, Lines 9-14) The trouble ticket may be referred to generically as a "work item" and may be an object in an object oriented computer system. A new work item may be created when a help request is first made, and may exist until the request is completely resolved. The work item can change state, be passed to various personnel at various locations for handling, and can be

modified at various stages. In addition, actions can be performed at various stages that are not related to modifying the work item itself. (Page 6, Line 15 through Page 7, Line 2)

As an example, a user can contact a help line via a web page accessed over the internet. The user may select a category of problem being encountered, such as a hardware problem with a certain brand of laser printer. A description of the problem can be entered by a simple text description, or as a series or responses to questions posed. When the user has entered the required information, including identification of the user, a work item is generated that may be routed to technical support and to which one or more responses may be generated. (Page 7, Lines 3-9)

The work item may be placed into a queue for technical support for that particular hardware. A technician may take the work item from the queue and determine whether the problem can be answered based on the information given. If not, additional handling may be required, or the technician may need to call or otherwise contact the customer for further information. The work item may be routed between several different people, even several different companies, before it is resolved. Once the problem has been solved, which can include on-site repair or replacement, the work item may be completed and archived. (Page 7, Lines 10-17)

In certain embodiments, the system handles the work item and its routing in a manner that is generic and can be used for numerous different business processes. Implemented as a software system running on a computer system, FIGURE 1 illustrates an example domain for the system. Domain 10 allows access through interface 12, which is the published set of methods by which the domain can be accessed. Contained within the domain are a number of composite actions 16, described below, and work items 16. Numerous other support and other modules and objects are included in domain 10 as known in the art, but the composite actions 14 and work items 16 are of primary conceptual interest. Access to the work items 16 may be through the defined interface 12. (Page 7, Line 18 through Page 8, Line 5)

FIGURE 2 illustrates the parts of an example work item 16. Each work item 16 may include a category, which is used to determine, in part, how the work item 16 is handled.

Each work item may include a state, which indicates where the work item 16 is in the business process flow. Typical states could include new, pending, awaiting follow up, completed, and so forth. A state may indicate whether the work item 16 is open or closed. An open item has been locked by a handler process, and work is being done on it. A closed item is waiting in a queue for work to be performed. (Page 8, Lines 6-12)

Each work item 16 may include a location. Work items may be located in a queue, and the location may identify the queue in which the work item 16 is located. Creator and responsible fields may indicate who created the work item 16 and who is responsible for dealing with it. The responsible field can change during the course of handling the work item. The due field, which may not be used in some cases, indicates when the problem represented by the work item should be resolved. This information can be used to, among other things, prioritize work items in a queue. (Page 8, Lines 13-19)

A history filed may contain a history of actions that have been performed on work item 16. Each time the item is amended in any way, or moved to a different queue, the history field may be updated. By reviewing the history entry, the compete sequence of events relating to this work item 16 can be recreated. A description field may include a definition of the problem represented by the work item, and can include text and coded indicators. (Page 8, Line 20 through Page 9, Line 3)

FIGURE 3 illustrates an example composite action 14. Each composite action 14 may contain a rule, which may be a Boolean expression that gives an answer of True or False. In certain embodiments, the rule may be omitted. By linking a series of composite actions together in sequence, nearly any business process can be defined using composite actions 14. (Page 9, Lines 4-7)

In certain embodiments, three sets of actions are provided. A first set 18 may be executed by default when the composite action has no rule, or when the rule is not evaluated because of a setting. A second set of actions 20 may be executed when the rule evaluates to True, and a third set of actions 22 may be evaluated when the rule evaluates to False. These actions may be any which can be executed by the system. For example, actions may include

sending the work item to a particular queue, sending e-mail or fax messages to the customer or a technician, and similar types of notifications. The actions can be more complex, and initiate various actions to be performed by the system. For example, an action could include access to a database of expert knowledge about a certain problem, followed by display of suggested solutions to a technician. (Page 9, Lines 8-18)

In the certain embodiments, each rule has three possible outcomes. If desired, other outcomes can be accommodated, using multi-way logical branching for example. Each outcome of the rule evaluation can have a separate set of actions to be executed, in the manner described above. (Page 9, Lines 19-22)

FIGURE 4 is a flowchart illustrating an example system in action. Initially, a work item is created 30 (e.g., a trouble ticket in the help desk example described herein). When a work item 16 is created, it may be assigned a category. Categories may be arranged hierarchically, so that a user can better define the problem by selecting a lower category. In the previous example of a printer hardware problem, high level categories can include, for example, hardware and software problems, with lower levels defining with more precision the type of hardware having the problem and the nature of the problem itself. (Page 10, Lines 1-8)

Each category may have an associated composite action 14. When a work item is initially created, the composite action for the associated category may be executed on the work item. Actions may include, for example, an e-mail notification that the work item has been entered, and an estimate of the delay before it will be handled. The work item may be placed initially into a queue, so each possible set of actions for the composite action associated with a category may include an action that places the work item into a queue 32. (Page 10, Lines 9-15)

The work item may be extracted from the queues by an application executing automatically or by a person calling up the work item through an application operating on the person's computer for example. When a work item is opened, it may be locked so that

another application cannot access it. A composite action may be executed on the work item 34, as described above. (Page 10, Lines 16-20)

The composite action can be executed by a technician after reviewing the work item. For example, after a technician opens a work item relating to a hardware problem with a printer, the technician may take an initial step toward resolving the problem. In some cases, it may only be necessary to send a prepared reply to the customer explaining how to deal with a known, common problem. In other cases, a more complicated series of actions may be initiated to resolve the problem. For example, it may be that the symptoms, although appearing to be hardware related, are actually caused by software. The technician may then transfer the work item to a different queue for processing and send a notification of this transfer to the customer. For example, the technician may select an appropriate action from a menu or other presentation on the person's computer display. The selected action may then call the corresponding composite action, which in turn executes the actions according to the result of its rule. These actions can include modifying the work item, moving it to a different queue, sending notifications, and so forth. Whenever a composite action is executed, the work item history may be updated to reflect any changes. (Page 10, Line 21 through Page 11, Line 15)

If the result of the composite action is to change the work item status to complete 36, the work item may be closed 38 and archived. If processing of the work item is not yet complete, it may be placed in a queue for future processing. The result of a composite action may be leaving the work item in the same queue for future handling, or to move it to a different queue. In either case, processing of the work item may be similar. Also, an action in a composite action may be to execute another composite action. This may result in a sequence of two or more composite actions being executed on the work item with no additional input from a technician or the customer. By defining the composite actions, a complex workflow can be performed on the work item in step 34. Eventually, the work item may be placed in a queue to await an action or decision to be performed by a person, but this is not required. (Page 11, Line 16 through Page 12, Line 5)

FIGURE 5 illustrates a conceptual data flow that may occur in the system described above. A work item may be created initially by an appropriate process 40. Transport of work items within the common workflow domain is represented by line 42. The work item may be placed into one of queues 44, 46, 48. Eventually, it may be picked up by the associated handler 50, 52, 54 and operated upon. Operations by a handler 50-54 may include the execution of one or more composite actions. At the end of such execution, the work item may be placed into another queue for further processing. As described above, in many cases the processing to be performed by a handler executes as the result of a selection made by a person after deciding how to deal with the work item. (Page 12, Lines 6-15)

Queue 56 may be used for holding work items that are completed, and process 58 may perform the task of completing and archiving completed work items. When the work item has been completely responded to, as defined by the business processes defined by the composite actions, the work item 16 may be placed in queue 56 for final disposal. (Page 12, Lines 16-20)

The described system and method may allow for certain types of businesses processes to be efficiently handled in comparison with prior art systems. A trouble ticket in connection with a help desk has been described as an example, but numerous other situations are suitable for the system and method of the invention. For example, nearly any customer relationship that involves several different people could use the described processes. Whenever any piece of work should be handled by different entities at different times, the described system and method can be defined to handle the process. (Page 12, Line 21 through Page 13, Line 6)

Grounds of Rejection to be Reviewed on Appeal

Are Claims 1-3, 5-7, 9-15, and 17-35 patentable under 35 U.S.C. § 103(a) over U.S. Patent 5,802,253 to Gross, et al. (*"Gross"*) in view of U.S. Patent 5,481,707 to Murphy, Jr., et al. (*"Murphy"*)?

Grouping of Claims

Appellants have made an effort to group claims to reduce the burden on the Board. In the Argument section of this Appeal Brief, where appropriate, Appellants present arguments

as to why particular claims subject to a ground of rejection are separately patentable from other claims subject to the same ground of rejection. To reduce the number of groups and thereby reduce the burden on the Board, Appellants do not argue individually every claim that recites patentable distinctions over the references cited by the Examiner, particularly in light of the clear allowability of Appellants' independent claims.

Appellants have concluded that the claims may be grouped together for purposes of this Appeal as follows:

1.   Group 1 may include Claims 1-3, 6-7, 10-15, 18-20, 23-24, 26-27, 29-30, and 33-34, which includes independent Claims 1 and 11;

2.   Group 2 may include dependent Claims 5 and 28;

3.   Group 3 may include dependent Claims 22 and 32; and

4.   Group 4 may include dependent Claims 25 and 35.

Argument

The rejection of Claims 1-3, 5-7, 9-15, and 17-35 under 35 U.S.C. § 103(a) as being unpatentable over the Examiner's proposed *Gross-Murphy* combination is improper and should be reversed by the Board.

The Claims are Allowable over the Proposed *Gross-Murphy* Combination

I.   Overview

Claims 1-3, 5-7, 9-15, and 17-35 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the Examiner's proposed *Gross-Murphy* combination. Copies of *Gross* and *Murphy* are attached as Appendices B and C, respectively. Appellants respectfully submit that Claims 1-3, 5-7, 9-15, and 17-35 are clearly patentable over the proposed *Gross-Murphy* combination. Thus, Appellants respectfully submit that these rejections are improper and should be reversed by the Board.

II.   Standard

The question raised under 35 U.S.C. § 103 is whether the prior art taken as a whole would suggest the claimed invention taken as a whole to one of ordinary skill in the art at the

time of the invention. *See* 35 U.S.C. § 103(a). Accordingly, even if all elements of a claim are disclosed in various prior art references, which is certainly not the case here as discussed below, the claimed invention taken as a whole cannot be said to be obvious without some reason given in the prior art why one of ordinary skill at the time of the invention would have been prompted to modify the teachings of a reference or combine the teachings of multiple references to arrive at the claimed invention.

The M.P.E.P. sets forth the strict legal standard for establishing a *prima facie* case of obviousness based on modification or combination of prior art references. "To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references where combined) must teach or suggest all the claim limitations." M.P.E.P. § 2142, 2143. The teaching, suggestion, or motivation for the modification or combination and the reasonable expectation of success must both be found in the prior art and cannot be based on an applicant's disclosure. *See Id.* (citations omitted). "Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art" at the time of the invention. M.P.E.P. § 2143.01. Even the fact that references *can* be modified or combined does not render the resultant modification or combination obvious unless the prior art teaches or suggests the desirability of the modification or combination. *See Id.* (citations omitted). Moreover, "To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. All words in a claim must be considered in judging the patentability of that claim against the prior art." M.P.E.P. § 2143.03 (citations omitted).

The governing Federal Circuit case law makes this strict legal standard even more clear.[1] According to the Federal Circuit, "a showing of a suggestion, teaching, or motivation

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[1] Note M.P.E.P. 2145 X.C. ("The Federal Circuit has produced a number of decisions overturning obviousness rejections due to a lack of suggestion in the prior art of the desirability of combining references.").

to combine or modify prior art references is an essential component of an obviousness holding." *In re Sang-Su Lee*, 277 F.3d 1338, 1343, 61 U.S.P.Q.2d 1430, 1433 (Fed. Cir. 2002) (quoting *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1124-25, 56 U.S.P.Q.2d 1456, 1459 (Fed. Cir. 2000)). "Evidence of a suggestion, teaching, or motivation . . . may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, the nature of the problem to be solved." *In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). However, the "range of sources available . . . does not diminish the requirement for actual evidence." *Id.* Although a prior art device "may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so." *In re Mills*, 916 F.2d at 682, 16 U.S.P.Q.2d at 1432. *See also In re Rouffet*, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453, 1457-58 (Fed. Cir. 1998) (holding a *prima facie* case of obviousness not made where the combination of the references taught every element of the claimed invention but did not provide a motivation to combine); *In Re Jones*, 958 F.2d 347, 351, 21 U.S.P.Q.2d 1941, 1944 (Fed. Cir. 1992) ("Conspicuously missing from this record is any evidence, other than the PTO's speculation (if that can be called evidence) that one of ordinary skill in the herbicidal art would have been motivated to make the modification of the prior art salts necessary to arrive at" the claimed invention.). Even a determination that it would have been obvious to one of ordinary skill in the art at the time of the invention to try the proposed modification or combination is not sufficient to establish a *prima facie* case of obviousness. *See In re Fine*, 837 F.2d 1071, 1075, 5 U.S.P.Q. 2d 1596, 1599 (Fed. Cir. 1988).

In addition, the M.P.E.P. and the Federal Circuit repeatedly warn against using an applicant's disclosure as a blueprint to reconstruct the claimed invention. For example, the M.P.E.P. states, "The tendency to resort to 'hindsight' based upon applicant's disclosure is often difficult to avoid due to the very nature of the examination process. However, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art." M.P.E.P. § 2142. The governing Federal Circuit cases are equally clear. "A critical step in analyzing the patentability of claims pursuant to [35 U.S.C. § 103] is casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. . . . Close adherence to this methodology is especially

important in cases where the very ease with which the invention can be understood may prompt one 'to fall victim to the insidious effect of a hindsight syndrome wherein that which only the invention taught is used against its teacher.'" *In re Kotzab,* 217 F.3d 1365, 1369, 55 U.S.P.Q.2d 1313, 1316 (Fed. Cir. 2000) (citations omitted). In *In re Kotzab,* the Federal Circuit noted that to prevent the use of hindsight based on the invention to defeat patentability of the invention, the court requires the Examiner to show a sufficient motivation in the prior art to combine the references that allegedly create the case of obviousness. *See id. See also, e.g., Grain Processing Corp. v. American Maize-Products,* 840 F.2d 902, 907, 5 U.S.P.Q.2d 1788, 1792 (Fed. Cir. 1988). Similarly, in *In re Dembiczak,* the Federal Circuit reversed a finding of obviousness by the Board, explaining that the required evidence of such a teaching, suggestion, or motivation is essential to avoid impermissible hindsight reconstruction of an applicant's invention:

> Our case law makes clear that the best defense against the subtle but powerful attraction of hind-sight obviousness analysis is *rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references.* Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability—the essence of hindsight.

175 F.3d at 999, 50 U.S.P.Q.2d at 1617 (emphasis added) (citations omitted).

III.   *Gross*

Gross discloses a rule-based system for handling incoming email messages. (Title; Abstract) According to the system disclosed in *Gross,* a plurality of rules are defined, each rule including an event indicia (when), a condition indicia (if), and an action indicia (then) (i.e. a when-if-then triplet). (*See* Column 2, Lines 44-49; Column 4, Lines 21-30; Claim 1) Events include receipt of a new message, the form of a received message, the reading of a message, the filing of a message, and other events. (*See* Column 4, Line 45 through Column 6, Line 13 (describing the different types of events); Claim 5) An event generator detects the occurrence of events, such as the receipt of a new message. (*See* Claim 1; Column 4, Lines 33-44) An event manager includes one or more event queues and creates event records for the events to store in the event queue. (*See* Claim 1; Column 7, Lines 30-34) For received messages, the event manager determines whether an event occurred, and if an event occurred

(e.g., the message is a newly received message), the event manager creates a new message event (which includes a pointer to the newly received message) and stores the new message event in the event queue for processing. (*See* Column 7, Lines 30-34) A rule processor determines which of the rules have an event (a when) corresponding to the detected event and invokes only those rules for which the event indicia (when) corresponds to the determined event. (*See* Abstract; Column 2, Lines 49-55) The condition indicia (if) of each determined rule is then evaluated and if the condition is met, the action (then) identified in the rule is performed. (*See* Claim 1; Column 4, Lines 31-32; Column 8, Lines 16-21)

According to the system disclosed in *Gross*, a user can also define events and rules for handling the events. (*See, e.g.,* Figures 10A-10B) For example, a user can specify that upon the event of a new email message, if the message is from E.Flynn, then the message should be moved to the "Status Reports" folder. (*See* Figures 10A-10B) The focus of *Gross* is on the use of the when-if-then triplet, "which facilitates definition of events considered to be significant events upon which to trigger actions." (*See* Abstract; Column 2, Lines 44-55) This capability reduces processing associated with previous systems (i.e. those based on an if-then combination), which would require that all conditions be tested for an incoming messages, rather than only those within a relevant event. (*See* Column 2, Lines 22-30 and Lines 44-55)

IV. *Murphy*

Murphy discloses a dedicated processor for task I/O and memory management. A dedicated processor called a task control unit, which is coupled to a memory interface unit, allocates and deallocates events, maintains the status of tasks running on the system, and schedules the execution of tasks. (Abstract)

V. Group 1 (Claims 1-3, 6-7, 10-15, 18-20, 23-24, 26-27, 29-30, and 33-34)

Claims 1-3, 6-7, 10-15, 18-20, 23-24, 26-27, 29-30, and 33-34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the proposed *Gross-Murphy* combination. Appellants respectfully submits that these claims are clearly patentable over the proposed *Gross-Murphy* combination. Thus, Appellants respectfully submits that these rejections are improper and should be reversed by the Board.

Claims 1-3, 6-7, 10-15, 18-20, 23-24, 26-27, 29-30, and 33-34 are separately patentable from every other claim subject to the same ground of rejection. These claims recite limitations that are substantially different from limitations recited in other claims. In addition, claims excluded from Group 1 that are subject to the same ground of rejection and that depend on independent Claims 1 and 11, respectively, recite patentable distinctions over the prior art beyond those recited in independent Claims 1 and 11 and cannot be properly grouped with independent Claims 1 and 11 for purposes of this Appeal.

A. The Proposed *Gross-Murphy* Combination Fails to Disclose, Teach, or Suggest Various Limitations Recited in Appellants' Claims

Appellants' Claim 1, which Appellants discuss by way of example, recites:

A method for handling jobs within a computer system, comprising:

in response to a request for a job to be performed, generating a work item representing the job to be performed, *the work item comprising a category, a state, a change history, and a description of the job represented by the work item, the job comprising a customer-generated request*;

placing the work item into a particular queue in a plurality of queues based at least in part on the category of the work item, each queue in the plurality of queues being for storing work items representing jobs to be performed;

in turn, opening the work item in the particular queue in response to a request from a business process, and executing one or more tasks on the work item, *each task being for resolving at least a portion of the job represented by the work item by resolving at least a portion of the customer-generated request*; and

after executing the one or more tasks on the work item:

modifying the state of the work item in response to execution of the one or more tasks;

updating the change history of the work item in response to execution of the one or more tasks;

if the job represented by the work item is complete, archiving the work item; and

if the job represented by the work item is not yet complete, placing the work item into one of the plurality of queues based at least in part on one or more tasks to be executed on the work item.

Gross, whether considered alone or in combination with *Murphy*, fails to disclose, teach, or suggest various limitations recited in Claim 1.

For example, *Gross* fails to disclose, teach, or suggest *"generating a work item representing a job to be performed, the work item comprising a category, a state, a change history, and a description of the job represented by the work item, the job comprising a customer-generated request,"* as recited in Claim 1. *Gross* merely discloses a rule-based system for handling incoming email messages and does not even mention a job represented by a work item, let alone "the job comprising a customer-generated request," as recited in Claim 1.

As another example, *Gross* fails to disclose, teach, or suggest *"each task being for resolving at least a portion of the job represented by the work item by resolving at least a portion of the customer-generated request,"* as recited in Claim 1. At least because the rule-based email-handling system disclosed in *Gross* fails to disclose, teach, or suggest a "job represented by [a] work item, the job comprising a customer-generated request," *Gross* necessarily fails to disclose, teach, or suggest "each task being for resolving at least a portion of the job represented by the work item," particularly "by resolving at least a portion of the customer-generated request," as recited in Claim 1.

The Examiner acknowledged, and Appellants agree, that *Gross* does not teach the use of a state or change history in a work item. However, the Examiner argued that *Murphy* does teach these and other limitations. (*See* Final Office Action, Pages 3-4) Appellants respectfully disagree. *Murphy* discloses a dedicated processor for task I/O and memory management. A dedicated processor called a task control unit, which is coupled to a memory interface unit, allocates and deallocates events, maintains the status of tasks running on the system, and schedules the execution of tasks. (Abstract) The Examiner stated, "*Murphy* teaches a request for a job to be performed, generating an item representing the job to be performed, the work item comprising a category, a state, a change history, and a description of the job represented by the work item, the job comprising a customer-generated request." (Final Office Action, Page 3) Appellants respectfully disagree.

At the outset, Appellants note that *Murphy* has nothing to do with "a customer-generated request," a "job comprising a customer-generated request," or "a work item representing the job," as recited in Claim 1. Instead, *Murphy* is directed to operating system

level processing of tasks. For example, in describing problems with the prior art, *Murphy* discloses that computer systems perform various system operations, including memory-to-memory transfer, task scheduling, and I/O request handling. (Column 2, Lines 23-45) In prior art systems, the performance of these operations places a major burden on the central processing unit. (Column 2, Lines 46-47) According to *Murphy*, other prior art systems included multiprocessor systems in which several processors share data processing functions. (Column 2, Lines 52-55) Another approach used multiple dedicated processors, each programmed to perform a specific system operation. (Column 2, Lines 58-60) As can be seen from these excerpts, *Murphy* has nothing to do with jobs comprising customer-generated requests, as recited in Claim 1.

Moreover, even assuming for the sake of argument that the tasks disclosed in *Murphy* could be equated with the job comprising a customer-generated request recited in Claim 1, *Murphy* would still fail to disclose, teach, or suggest "in response to a request for a job to be performed, generating a work item representing the job to be performed, *the work item comprising a category, a state, a change history, and a description of the job represented by the work item*, the job comprising a customer-generated request," as recited in Claim 1. *Murphy* discloses a task control unit, which is a dedicated processor that oversees all tasks and events that are active within the system. (Abstract; Column 11, Lines 15-16) The objective of the task manager is to keep each processor within the system as busy as possible. (Column 11, Lines 20-22) *Murphy* merely discloses that its task control unit maintains the state of each task and a plurality of task statistics. (Column 11, Lines 28-41) Thus, even assuming for the sake of argument that the task control unit maintaining a state of each task could be equated with "the work item comprising . . . a state," as recited in Claim 1, and even further assuming that the task control unit maintaining a plurality of statistics could be equated with "the work item comprising . . . a change history," as recited in Claim 1, *Murphy* would still fail to disclose, teach, or suggest "the work item comprising *a category*, a state, a change history, *and a description of the job represented by the work item*," as recited in Claim 1.

Murphy also fails to disclose, teach, or suggest "after executing one or more tasks on the work item . . . modifying the state *of the work item* in response to execution of the one or

more tasks," as recited in Claim 1. As discussed above, *Murphy* merely discloses that its task control unit maintains the state of each task and a plurality of task statistics. (Column 11, Lines 28-41) These task states include a WAIT state, a READY state, and an ALIVE state. (Column 11, Lines 30-38) The task control unit can change a task from the WAIT state to the READY state, indicting that the task is waiting for a processor to become available. (Column 11, Lines 33-36 and 46-48) It appears that the Examiner equated the one or more tasks recited in Claim 1 with the task disclosed in *Murphy*. (*See* Final Office Action, Page 3) Assuming for the sake of argument that this equation is possible (which Appellants do not concede), *Murphy* merely discloses modifying the state of tasks. However, Claim 1 recites "after executing one or more tasks on the work item . . . modifying the state of *the work item in response to completion of the one or more tasks*." This deficiency of *Murphy* stems from the fact that *Murphy* fails to even disclose, teach, or suggest a "job comprising a customer-generated request" and "a work item representing the job representing the job to be performed," as recited in Claim 1.

Similarly, *Murphy* fails to disclose, teach, or suggest "after executing the one or more tasks on the work item . . . updating the change history *of the work item* in response to execution of the one or more tasks" and "if the job represented by the work item is not yet complete, placing the work item into one of the plurality of queues *based at least in part on one or more tasks to be executed on the work item*," as recited in Claim 1.

Murphy also fails to disclose, teach, or suggest "if the job represented by the work item is complete, archiving *the work item*," as recited in Claim 1. The Examiner cites the following portion of *Murphy* as disclosing this limitation: .

> The IOU 803 acknowledges the message from the CMU 805 (step 915), and removes the IOCB from the result queue. If the IOCB has completed without error, then the IOU signals the TCU to change the task state of the waiting task, as indicated by the event in the IOCB, READY state. The TCU performs this operation (step 916). This completes the typical I/O sequence.

(Column 15, Lines 56-62) However, nowhere does this cited portion of *Murphy* mention anything about archiving a work item. Instead, this cited portion of *Murphy* merely mentions changing the task state. The Examiner also cites Column 11, Lines 42-50 of *Murphy* as

disclosing this limitation. However, this cited portion merely discloses, "When the IOU completes an I/O operation for a particular task, the IOU notifies the [transfer control unit] that the required data is now located in main memory." (Column 11, Lines 44-46) This in no way discloses, teaches, or suggests "if the job represented by the work item is complete, archiving *the work item*," as recited in Claim 1. At best, the cited portion of *Murphy* discloses transferring data responsive to an I/O operation to main memory.

For at least these reasons, Appellants respectfully request reconsideration and allowance of independent Claim 1 and its dependent claims. For reasons similar to those discussed above with reference to independent Claim 1, Appellants respectfully request reconsideration and allowance of independent Claim 11 and its dependent claims.

B.   The Proposed *Gross-Murphy* Combination is Improper

The rejection of Appellants' claims is also improper because the Examiner has not shown the required teaching, suggestion, or motivation in *Gross*, *Murphy*, or in the knowledge generally available to those of ordinary skill in the art at the time of the invention to combine or modify *Gross* or *Murphy* in the manner the Examiner proposes. The rejected claims are allowable for at least this reason.

Appellants respectfully submit that the Examiner's conclusory assertion that it would have been obvious to combine the teachings of *Gross* with the teachings of *Murphy* to arrive at Appellants' invention is entirely insufficient to support a *prima facie* case of obviousness under 35 U.S.C. § 103(a) under the M.P.E.P. and the governing Federal Circuit case law.

Appellant reiterates the legal standard incumbent on the Examiner for establishing a *prima facie* case of obviousness (as set forth above) with which the Board is no doubt intimately familiar.

With regard to the proposed *Gross-Murphy* combination, the Examiner states, "It would have been obvious to one skilled in the art to combine the teachings of Gross and Murphy in order to maintain accurate state information. By having accurate state information, one is able to determine which tasks are operating properly, thus being able to

monitor the entire system in a more efficient manner." (Final Office Action, Page 4). Appellants respectfully submit that the Examiner has done nothing more than propose an alleged advantage of combining *Gross* with *Murphy* (and one which Appellants do not admit could even be achieved by combining these references in the manner the Examiner proposes). The Examiner has not pointed to any portions of either *Gross* or *Murphy* that would teach, suggest, or motivate one of ordinary skill in the art at the time of invention to incorporate the event-driven and conditional rule based mail messaging system disclosed in *Gross* with the I/O task management techniques disclosed in *Murphy*. It certainly would not have been obvious to one of ordinary skill in the art at the time of the invention, based solely on the prior art, *to even attempt* to incorporate into the event-driven and conditional rule based mail messaging system disclosed in *Gross* such I/O task management techniques as those disclosed in *Murphy*. Even more clearly, it certainly would not have been obvious to one of ordinary skill in the art at the time of the invention, based solely on the prior art, *to actually* incorporate into the event-driven and conditional rule based mail messaging system disclosed in *Gross* such I/O task management techniques as those disclosed in *Murphy*, which would be required to establish a *prima facie* case of obviousness under the M.P.E.P. and the governing Federal Circuit case law.

Appellants also respectfully note that "the factual inquiry whether to combine references must be thorough and searching." *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351-52, 60 U.S.P.Q.2d 1001, 1008 (Fed. Cir. 2001). Thus, the burden is on the examiner to identify concrete evidence in the record to support his conclusion that it would have been obvious to modify the teachings of the cited references to achieve the claimed invention. *See, In re Kotzab*, 217 F.3d 1365, 1370, 55 U.S.P.Q.2d 1313, 1316-17 (Fed. Cir. 2000). The Examiner's conclusory assertion that it would have been obvious to combine *Murphy* with *Gross* fails to provide a thorough and searching factual inquiry and does not identify any concrete evidence in the record for combining these references.

Accordingly, since the prior art fails to provide the required teaching, suggestion, or motivation to combine *Gross* with *Murphy* in the manner the Examiner proposes, Appellants respectfully submit that the Examiner's conclusions set forth in the final Office Action fall well short of the requirements set forth in the M.P.E.P. and the governing Federal Circuit

case law for demonstrating a *prima facie* case of obviousness. Thus, Appellants respectfully submit that the Examiner's proposed combination of *Gross* with *Murphy* appears to be merely an attempt, with the benefit of hindsight, to reconstruct Appellants' claims and is unsupported by the teachings of *Gross* and *Murphy*. Appellants respectfully submit that the rejection must therefore be withdrawn.

Second, as demonstrated above, Appellants respectfully submit that *Gross* is wholly inadequate as a reference against independent Claim 1. Thus, even assuming for the sake of argument that *Murphy* disclosed the portions of Claim 1 that the Examiner suggests, and even assuming for the sake of argument that there was the required teaching, suggestion, or motivation to combine *Gross* with *Murphy* as the Examiner proposes, the proposed *Gross-Murphy* combination would still fail to disclose, teach, or suggest the limitations specifically recited in independent Claim 1, as is required under the M.P.E.P. and the governing Federal Circuit cases for a *prima facie* case of obviousness.

C.   Conclusion with respect to Group 1

For at least these reasons, the proposed *Gross-Murphy* combination fails to support the obviousness rejection of independent Claim 1 and its dependent claims. For analogous reasons, the proposed *Gross-Murphy* combination fails to support the obviousness rejections of independent Claim 11 and its dependent claims. These claims are therefore patentable over the Examiner's proposed *Gross-Murphy* combination. Appellants respectfully submit that these rejections are improper and should be reversed by the Board.

VI.   Group 2 (Claims 5 and 28)

Dependent Claims 5 and 28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the proposed *Gross-Murphy* combination. Appellants respectfully submits that these claims are clearly patentable over the proposed *Gross-Murphy* combination. Thus, Appellants respectfully submits that these rejections are improper and should be reversed by the Board.

Dependent Claims 5 and 28 are separately patentable from every other claim subject to the same ground of rejection. These claims recite limitations that are substantially

different from limitations recited in other claims and cannot be properly grouped with the claims of other groups for purposes of this Appeal. For example, these claims recite patentable distinctions over the prior art beyond those recited in independent Claims 1 and 11 from which Claims 5 and 28 depend. As another example, Claims 5 and 28 recite patentable distinctions over the prior art different than those recited in other claims that depend from independent Claims 1 and 11.

Dependent Claims 5 and 28 depend from independent Claims 1 and 11, respectively, which Appellants has shown above to be clearly patentable over the proposed *Gross-Murphy* combination, and are patentable for at least this reason. Furthermore, in addition to those reasons discussed above with reference to independent Claims 1 and 11, dependent Claims 5 and 28 are patentable because they recite further patentable distinctions over the proposed *Gross-Murphy* combination.

For example, Claim 5 recites that "executing a task comprises moving the work item to a queue different from its present queue." Dependent Claim 28 recites substantially similar limitations.

One portion of *Gross* cited by the Examiner as purportedly disclosing these limitations merely states:

> The event manager 24 interfaces with the rest of the system and initializes the in-memory (non-persistent) event queue 20, locates and opens the disk based persistent event queue 28 and synchronizes the non-persistent and persistent queues, effectively merging the queues. The event manager 24 centralizes event policies and transparently implements event prioritization. When an event record is fetches by the event manager 24 for processing, the events are fetched from the queues in accordance with a fixed prioritization, subject to an event-kind filter 54.

(Column 7, Lines 54-63; *see* Final Office Action, Page 5) The other portion of *Gross* cited by the Examiner as purportedly disclosing these limitations merely states, "Ticklers can be implemented in the present rule based messaging system using TIMER events. For example, the system can be instructed to move a message to a "today" folder on a specific date." (Column 5, Lines 55-58; *see* Final Office Action, Page 5)

Neither of these cited portions of *Gross* discloses, teaches, or suggests that "executing a task comprises moving the work item to a queue different from its present queue," as recited in Claim 5 for example. Synchronization of separate queues (i.e. persistent and non-persistent queues) for purposes of implementing event prioritization, as disclosed in the first cited portion does not disclose, teach, or suggest that "executing a task comprises moving the work item to a queue different from its present queue," as recited in Claim 5 for example. Moreover, moving an email message to a specified folder (e.g., a "today" folder) on a specific date does not disclose, teach, or suggest that "executing a task comprises moving the work item to a queue different from its present queue[, each queue in the plurality of queues being for storing work items representing jobs to be performed]," as recited in Claim 5 for example.

For at least these reasons, the proposed *Gross-Murphy* combination fails support the obviousness rejection of dependent Claims 5 and 28. These claims are therefore patentable over the proposed *Gross-Murphy* combination. Appellants respectfully submits that these rejections are improper and should be reversed by the Board.

VII. Group 3 (Claims 22 and 32)

Dependent Claims 22 and 32 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the proposed *Gross-Murphy* combination. Appellants respectfully submits that these claims are clearly patentable over the proposed *Gross-Murphy* combination. Thus, Appellants respectfully submits that these rejections are improper and should be reversed by the Board.

Dependent Claims 22 and 32 are separately patentable from every other claim subject to the same ground of rejection. These claims recite limitations that are substantially different from limitations recited in other claims and cannot be properly grouped with the claims of other groups for purposes of this Appeal. For example, these claims recite patentable distinctions over the prior art beyond those recited in independent Claims 1 and 11 from which Claims 22 and 32 depend. As another example, Claims 22 and 32 recite patentable distinctions over the prior art different than those recited in other claims that depend from independent Claims 1 and 11.

Dependent Claims 22 and 32 depend from independent Claims 1 and 11, respectively, which Appellants has shown above to be clearly patentable over the proposed *Gross-Murphy* combination, and are allowable for at least this reason. Furthermore, in addition to those reasons discussed above with reference to independent Claims 1 and 11, dependent Claims 22 and 32 are patentable because they recite further patentable distinctions over the proposed *Gross-Murphy* combination.

For example, dependent Claim 22 recites:

> The method of Claim 1, wherein the state of the work item comprises one or more of:
> an open state indicating that the work item is currently opened by a business process and is currently not available to be opened by another business process; and
> a closed state indicating that the work item is waiting in its associated queue for one or more tasks to be performed on the work item by a business process.

Dependent Claim 32 recites substantially similar limitations.

The Examiner asserts that *Murphy* discloses these limitations. As discussed above, *Murphy* merely discloses that its task control unit maintains the state of each task and a plurality of task statistics. (Column 11, Lines 28-41) These task states include a WAIT state, a READY state, and an ALIVE state. (Column 11, Lines 30-38) The task control unit can change a task from the WAIT state to the READY state, indicting that the task is waiting for a processor to become available. (Column 11, Lines 33-36 and 46-48) It appears that the Examiner equated the one or more tasks recited in Claim 1 with the task disclosed in *Murphy*. (*See* Final Office Action, Page 3) Assuming for the sake of argument that this equation is possible (which Appellants do not concede), *Murphy* merely discloses modifying the state of tasks.

First, Appellants note that *Murphy* does not disclose or even relate to "a business process." Thus, *Murphy* necessarily fails to disclose, teach, or suggest the limitations recited in claims 22 and 32.

Second, as discussed above with respect to Claim 1, *Murphy* fails to disclose, teach, or suggest a "work item," as recited in Appellants' claims. Thus, for this additional reason, *Murphy* necessarily fails to disclose, teach, or suggest the limitations recited in Claims 22 and 32.

Third, the portions of *Murphy* cited by the Examiner as purportedly disclosing the "open state" and the "closed state" recited in Claims 22 and 32 fails to disclose, teach, or suggest the "open state" and the "closed state." *Murphy* discloses that a task which exists on the system is said to be in one of three states. According to *Murphy*, a READY state, which the Examiner equates with the "open state" recited in Claims 22 and 32, indicates that the "task has been placed in the ready queue and is waiting for a processor 105 to become available. A task may transition to the READY state as a result of a completed I/O operation." (Column 11, Lines 33-36; *see* Final Office Action, Page 9) However, nowhere does *Murphy* disclose, teach, or suggest that the READY state indicates "that the work item is currently opened by a business process and is currently not available to be opened by another business process," as recited in Claims 22 and 32. Additionally, according to *Murphy*, a WAIT state, which the Examiner equates with the "closed state" recited in Claims 22 and 32, indicates that "[p]rocessing of the task is suspended while the task is waiting for an event to occur (i.e. an I/O operation to be completed)." (Column 11, Lines 29-33; *see* Final Office Action, Page 9) However, nowhere does *Murphy* disclose, teach, or suggest that the WAIT state indicates "that the work item is waiting in its associated queue for one or more tasks to be performed on the work item by a business process," as recited in Claims 22 and 32.

For at least these reasons, the proposed *Gross-Murphy* combination fails support the obviousness rejection of dependent Claims 22 and 32. Claims 22 and 32 are therefore patentable over the proposed *Gross-Murphy* combination. Appellants respectfully submits that these rejections are improper and should be reversed by the Board.

VIII.   Group 4 (Claims 25 and 35)

Dependent Claims 25 and 35 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the proposed *Gross-Murphy* combination. Appellants respectfully submits

that these claims are clearly patentable over the proposed *Gross-Murphy* combination. Thus, Appellants respectfully submits that these rejections are improper and should be reversed by the Board.

Dependent Claims 25 and 35 are separately patentable from every other claim subject to the same ground of rejection. These claims recite limitations that are substantially different from limitations recited in other claims and cannot be properly grouped with the claims of other groups for purposes of this ' Appeal. For example, these claims recite patentable distinctions over the prior art beyond those recited in independent Claims 1 and 11 from which Claims 25 and 35 depend. As another example, Claims 25 and 35 recite patentable distinctions over the prior art different than those recited in other claims that depend from independent Claims 1 and 11.

Dependent Claims 25 and 35 depend from independent Claims 1 and 11, respectively, which Appellants has shown above to be clearly patentable over the proposed *Gross-Murphy* combination, and are allowable for at least this reason. Furthermore, in addition to those reasons discussed above with reference to independent Claims 1 and 11, dependent Claims 25 and 35 are patentable because they recite further patentable distinctions over the proposed *Gross-Murphy* combination.

For example, Claim 25 recites that "the job comprises a customer problem associated with a product or service, the job being completed when the customer's problem is resolved." Dependent Claim 35 recites substantially similar limitations.

As allegedly disclosing these limitations, the Examiner cites the following portion of *Gross*: "Further, the system requires extensive parsing of user-specified instructions to detect instruction conflicts, completeness and consistency." (Column 1, Lines 60-62; *see* Final Office Action, Page 10) First, Appellants note that the cited portion of *Gross* relates to user specification of instructions for handling email messages, which is unrelated to Appellants' invention. Second, the cited portion of *Gross* clearly fails to disclose, teach, or suggest that "the job comprises a customer problem associated with a product or service, the job being completed when the customer's problem is resolved," as recited in claims 25 and 35. Indeed,

Gross fails to even disclose, teach, or suggest any such job, let alone a job that "comprises a customer problem associated with a product or service, the job being completed when the customer's problem is resolved."

For at least these reasons, the proposed *Gross-Murphy* combination fails support the obviousness rejection of dependent Claims 25 and 35. These claims are therefore patentable over the proposed *Gross-Murphy* combination. Appellants respectfully submits that these rejections are improper and should be reversed by the Board.

Conclusion

Appellants has demonstrated that the present invention, as claimed, is clearly patentable over the prior art cited by the Examiner. Therefore, Appellants respectfully requests the Board of Patent Appeals and Interferences to reverse the final rejection of the Examiner and instruct the Examiner to issue a Notice of Allowance of all pending claims.

The Commissioner is hereby authorized to charge the filing fee of $340.00 for this Appeal Brief to Deposit Account No. 02-0384 of Baker Botts L.L.P. Although Appellants believes no other fees are due, the Commissioner is hereby authorized to charge any additional fees and credit any overpayments to Deposit Account No. 02-0384 of Baker Botts L.L.P. A duplicate first page and signature page of this document is attached for purposes of using the Deposit Account.

Respectfully submitted,

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Date: November 22, 2004

Customer Number: **05073**

Appendix A

1.   (Previously presented) A method for handling jobs within a computer system, comprising:

in response to a request for a job to be performed, generating a work item representing the job to be performed, the work item comprising a category, a state, a change history, and a description of the job represented by the work item, the job comprising a customer-generated request;

placing the work item into a particular queue in a plurality of queues based at least in part on the category of the work item, each queue in the plurality of queues being for storing work items representing jobs to be performed;

in turn, opening the work item in the particular queue in response to a request from a business process, and executing one or more tasks on the work item, each task being for resolving at least a portion of the job represented by the work item by resolving at least a portion of the customer-generated request; and

after executing the one or more tasks on the work item:

modifying the state of the work item in response to execution of the one or more tasks;

updating the change history of the work item in response to execution of the one or more tasks;

if the job represented by the work item is complete, archiving the work item; and

if the job represented by the work item is not yet complete, placing the work item into one of the plurality of queues based at least in part on one or more tasks to be executed on the work item.

2.   (Previously presented) The method of Claim 1, wherein executing a task comprises modifying the work item.

3.   (Previously presented) The method of Claim 1, wherein executing a task comprises one or more of:

sending an e-mail to a person; and

sending a fax to a person.

4.   (Canceled)

5.   (Previously presented) The method of Claim 1, wherein executing a task comprises moving the work item to a queue different from its present queue.

6.   (Previously presented) The method of Claim 1, wherein executing one or more tasks comprises:

invoking one or more composite actions, each of the one or more composite actions including a rule and at least one task to be executed as a result of evaluation of the rule;

evaluating the rule for each of the one or more composite actions; and

executing the task corresponding to the evaluation of the rule.

7.   (Previously presented) The method of Claim 1, wherein the work item further comprises an identification of a party that created the work item.

8.   (Canceled)

9.   (Previously presented) The method of Claim 1, wherein the work item further comprises a due date for the work item indicating when the job represented by the work item should be resolved.

10.   (Previously presented) The method of Claim 1, wherein the work item further comprises a current location for the work item, the current location for the work item identifying the queue in which the work item has been placed.

11.   (Previously presented) A system for handling jobs within a computer system, comprising:

one or more memory units operable to store a plurality of queues, each queue in the plurality of queues being for storing one or more work items; and

one or more processing units collectively operable to:

generate, in response to receiving a request for a job to be performed, a work item representing the job to be performed, the work item comprising a category, a state, a history, and a description of the job represented by the work item;

place the work item into a particular queue in the plurality of queues based at least in part on the category of the work item, each queue in the plurality of queues for storing work items representing jobs to be performed;

in turn, open the work item in the particular queue in response to a request from a business process, and executing one or more tasks on the work item, each task being for resolving at least a portion of the job represented by the work item; and

after executing the one or more tasks on the work item:

modify the state of the work item in response to execution of the one or more tasks;

update the change history of the work item in response to execution of the one or more tasks;

archive the work item if the job represented by the work item is complete; and

place the work item into one of the plurality of queues based at least in part on one or more tasks to be executed on the work item if the job represented by the work item is not yet complete.

12.   (Previously presented) The system of Claim 11, wherein the one or more processing units execute at least one task by invoking one or more composite actions, each composite action being stored in the one or more memory units and comprising:

a rule to be evaluated; and

at least one task to be performed executed as a result of evaluation of the rule.

13.   (Original) The system of Claim 12, wherein the rule evaluates to a value of true or false.

14. (Previously presented) The system of Claim 13, further comprising a set of rules to be evaluated if there is no rule to be evaluated.

15. (Previously presented) The system of Claim 11, wherein the work further comprises an identification of a party that created the work item.

16. (Canceled)

17. (Previously presented) The system of Claim 11, wherein the work item further comprises a due date for the work item indicating when the job represented by the work item should be resolved.

18. (Previously presented) The system of Claim 11, wherein the work item further comprises a current location for the work item, the current location for the work item identifying the queue in which the work item has been placed.

19. (Previously presented) The method of Claim 1, wherein the work item is a computer-implemented object.

20. (Previously presented) The method of Claim 1, wherein the business process is automated such that the business process automatically opens the work item in the particular queue.

21. (Previously presented) The method of Claim 1, wherein the work item persists until the job represented by the work item is completed.

22. (Previously presented) The method of Claim 1, wherein the state of the work item comprises one or more of:

an open state indicating that the work item is currently opened by a business process and is currently not available to be opened by another business process; and

a closed state indicating that the work item is waiting in its associated queue for one or more tasks to be performed on the work item by a business process.

23. (Previously presented) The method of Claim 1, further comprising providing a plurality of composite actions, each composite action comprising:

a rule for determining an appropriate action to be performed on the work item;

a first set of one or more actions to be performed if the rule evaluates to TRUE; and

a second set of one or more actions to be performed if the rule evaluates to FALSE; and

wherein executing one or more tasks on the work item comprises invoking one or more of the plurality of composite actions.

24.   (Previously presented) The method of Claim 23, wherein:

each category is associated with a composite action; and

the method further comprises, in response to generating a work item, specifying the category of the work item based on the job represented by the work item, a rule associated with the composite action that is associated with the category of the work item determining the particular queue in which the work item should be placed.

25.   (Previously presented) The method of Claim 1, wherein the job comprises a customer problem associated with a product or service, the job being completed when the customer's problem is resolved.

26.   (Previously presented) The system of Claim 11, wherein a task comprises modifying the work item.

27.   (Previously presented) The system of Claim 11, wherein a task comprises one or more of:

sending an e-mail to a person; and

sending a fax to a person.

28.   (Previously presented) The system of Claim 11, wherein a task comprises moving the work item to a queue different from its present queue.

29.   (Previously presented) The system of Claim 11, wherein the work item is a computer-implemented object.

30.   (Previously presented) The system of Claim 11, wherein the business process is automated such that the business process automatically opens the work item in the particular queue.

31.   (Previously presented) The system of Claim 11, wherein the work item persists until the job represented by the work item is completed.

32.   (Previously presented) The system of Claim 11, wherein the state of the work item comprises one or more of:

an open state indicating that the work item is currently opened by a business process and is currently not available to be opened by another business process; and

a closed state indicating that the work item is waiting in its associated queue for one or more tasks to be performed on the work item by a business process.

33.   (Previously presented) The system of Claim 11, wherein the one or more memory units store a plurality of composite actions, each composite action comprising:

a rule for determining an appropriate action to be performed on the work item;

a first set of one or more actions to be performed if the rule evaluates to TRUE; and

a second set of one or more actions to be performed if the rule evaluates to FALSE; and

wherein the one or more processing units execute one or more tasks on the work item by involving one or more of the plurality of composite actions.

34.   (Previously presented) The system of Claim 33, wherein:

each category is associated with a composite action; and

the one or more processing units are further operable to, in response to generating a work item, specify the category of the work item based on the job represented by the work item, a rule associated with the composite action that is associated with the category of the work item determining the particular queue in which the work item should be placed.

35.   (Previously presented) The system of Claim 11, wherein the job comprises a customer problem associated with a product or service, the job being completed when the customer's problem is resolved.